

AMENDMENTS TO THE CLAIMS

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended): A process for the fluid catalytic cracking of mixed feedstocks of hydrocarbons ~~feeds~~ from different sources, in a riser reactor and in the presence of a zeolitic catalyst, under cracking conditions ~~and in the absence of added hydrogen, for obtaining~~ mainly producing light products such as LPG, said mixed ~~feeds~~ feedstocks comprising feeds A and B, with feed B being more refractory to cracking, wherein said process comprises the simultaneous segregated injection-injections of said feeds A and B, in distinct riser locations, and ~~wherein~~ and includes the steps of:

a) injecting feed A at a location at the bottom of the riser reactor, which sets the base of the riser reactive section, with a temperature rise ranging from 10 to 50°C; and

a)b) injecting feed B, is in at an amount of from 5% and 50% by mass 5 to 50 wt% based on the total processed feed mixed feedstock, downstream, after maximum LPG production from feed A, at one or more riser locations between 10% and 80% of the riser reactive section;

wherein the injection conditions in a high dispersion degree of feed B comprise:

dispersion steam ranging from 5 to 20%; and

a temperature equal to or higher than the injection temperature of feed A.

~~; b) the injection location of feed A sets the base of the riser reactive section; d) feed B is injected in one or more riser locations downstream the injection location of feed A and shows, in combination: i) higher coke selectivity relative to feed A; and ii) higher contaminant content, and where the injection conditions of feed B involve: i) injection location between 10% and 80% of~~

~~the total length of the riser reactive section; ii) improved dispersion; and iii) injection temperature equal or higher to the injection temperature of feed A, the LPG resulting from such cracking process being recovered in higher amount than that obtained if feeds A and B were injected both in the base of the riser reactive section.~~

2. (original): A process according to claim 1, wherein feed A is a heavy distillation gasoil (HVGO).

3. (original): A process according to claim 1, wherein feed B is produced by a thermal or by a physical separation process.

4. (original): A process according to claim 3, wherein feed B is produced by a pyrolysis, delayed coking and shale oil retorting process.

5-7. (canceled).

8. (currently amended): A process according to claim 1, wherein the injection riser location of feed B ~~in the riser occurs downstream of the injection location of feed A, in the section comprised of from~~ is between 25% and 50% of the riser reactive section.

9-10. (canceled).

11. (original): A process according to claim 1, wherein the overall catalyst circulation rate is kept nearly constant during the cracking of feeds A and B.

12-19. (canceled).

20. (original): A process according to claim 1, wherein the temperature rise in the mixing region between feed A and the regenerated catalyst is of from 10°C to 50°C, provided by the injection of feed B in a riser location downstream of the injection location of feed A, and is in the range of from 520°C to 650°C.

21. (canceled).

22. (original): A process according to claim 1, wherein the riser outlet reaction temperature is in the range of from 520°C to 590°C.

23-26. (canceled).

27. (original): A process according to claim 1, wherein the flow of the reactive catalyst to oil mixture is upwards.

28. (original): A process according to claim 1, wherein the flow of the reactive catalyst to oil mixture is downwards.

29-30. (canceled).

31. (original): A process according to claim 1, wherein the catalyst comprises a Y zeolite.

32. (original): A process according to claim 1, wherein the catalyst comprises a ZSM-5 zeolite.

33. (original): A process according to claim 1, wherein the catalyst comprises a combination of Y and ZSM-5 zeolites in any amount.

34. (currently amended): A process according to claims 31, 32 ~~and~~ or 33, wherein the zeolite catalysts comprise zeolites as additives.

35-36. (canceled).